

1 WHAT IS CLAIMED IS:

1 1. An apparatus for processing substrates, comprising:
2 (a) a chamber having:
3 (i) a sidewall;
4 (ii) a lid disposed at one end of the sidewall; and
5 (iii) a bottom disposed at the opposite end of the sidewall;
6 (b) a substrate support member cantilever mounted on the sidewall;
7 (c) one or more gas inlets disposed through one or more of the sidewall and the lid to
8 admit gas into the chamber;
9 (d) one or more gas inlets disposed through one or more of the sidewall and the lid to
10 admit one or more cleaning gases into the chamber; and
11 (e) an exhaust port disposed in the bottom of the chamber.
12 2. The apparatus of claim 1 wherein the lid comprises a dome comprised of a dielectric
13 material.
14 3. The apparatus of claim 2 wherein the dome comprises a material selected from the group
15 consisting of Al_2O_3 , AlN , SiO_2 or combinations thereof.
16 4. The apparatus of claim 3 wherein the dome further comprises a generally annular
17 sidewall and a generally planar top.
18 5. The apparatus of claim 2 further comprising a heat transfer assembly disposed adjacent to
19 the lid.

1 6. The apparatus of claim 5 wherein the heat transfer assembly comprises one or more heat
2 transfer plates.

1 7. The apparatus of claim 6 wherein the one or more heat transfer plates comprise a heating
2 plate and a cooling plate.

1 8. The apparatus of claim 7 wherein the heating and cooling plates are comprised of a
2 thermally conductive material.

1 9. The apparatus of claim 8 wherein the thermally conductive material is selected from the
2 group consisting of AlN, SiN, Al or combinations thereof.

1 10. The apparatus of claim 9 wherein the heating plate includes a resistive heating element
2 disposed therein.

1 11. The apparatus of claim 10 wherein the cooling plate includes one or more fluid passages
2 disposed therein.

1 12. The apparatus of claim 11 wherein a heat conducting member is disposed between the
2 heating plate and the cooling plate.

1 13. The apparatus of claim 12 wherein the heat conducting member comprises a heat transfer
2 material such as grafoil, chromerics, or combinations thereof.

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1 14. The apparatus of claim 13 wherein the heat conducting member comprises one or more
2 pucks disposed between the heating and cooling plates.